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ABSTRACT

To develop research capabilities among public relations professionals, a research teaching program was begun as part of an advanced undergraduate course using an online computer terminal system to analyze up-to-date field survey data. Students use an interactive computer program designed to provide a linking system of live research data and active computer analysis in comprehensive and realistic audience-targeted communications programs. Students are given simple instructions on how to use particular available programs and after they receive an assignment for a particular campaign, run their programs, learning through the laboratory experience of trial and error. Students study the data, discuss it, learn to ask sophisticated questions, and learn to crosstabulate. The objective of such teaching is to introduce students to the research process, to expose them to a technology which is becoming integral to many organizations, and to teach the concept of audience targeting of communications. Both student and faculty evaluations have consistently found this to be an effective method of instruction. (TJ)

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PRECISION COMMUNICATION:

INTERACTIVE COMPUTER APPLICATIONS

IN DATA-BASED PUBLIC RELATIONS PROGRAMS

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

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PRECISION COMMUNICATION: INTERACTIVE COMPUTER APPLICATIONS AND DATA-BASED PUBLIC RELATIONS PROGRAMS

Introduction

Effective fact-finding research has long been advocated as essential to successful public relations communications programs. Research, however, has too often been as neglected in the practice -- and training -- of most practitioners as it has been extensively encouraged in the literature.

In coping with this contradiction over the years the curricula of many schools have been expanded to include an elective introductory survey research course as recommended in the 1975 report of the Commission on Public Relations Education: "Theory and practice of opinion and marketing survey techniques. Planning, design, sampling, questionnaire construction, interviewing, field operations (and) analysis of data."[1] At least three problems remain with this approach, however. First, the course, if offered, is usually an elective and therefore only a portion of the undergraduate public relations majors have this introduction to research. Second, a survey course, by its very nature, usually provides little or no opportunity to operationalize the theories and techniques of the subject. Third, this approach does not provide future practitioners with an opportunity to apply research techniques directly and specifically to the comprehensive development of communications programs or campaigns.

The demands for developing research capabilities among the public relations professionals have continued for decades. The popular Cutlip and Center text has been urging the adoption of a research attitude for the entire lifetimes of most of our students and the professional careers of most of the practitioners. Early editions of that seminal text carried a message that continues to be repeated in similar fashion in the current edition:

> Executives are coming to realize that an organization's human relations problems are just as specific and researchable as are other problems. This parallels the maturing fields of opinion measurement and public relations. Methodical, systematic research is the foundation of effective public relations.[2]

Support for this theme is abundant in the extant literature of public relations. Writing in Stephenson's Handbook of Public Relations, Harvill observed that "A dawning appreciation of the value of public relations research has crept over the profession." She cited a 1963 survey of the role of research as evidence of substantial increases in the use of formal and informal research by leading practitioners.[3] Reporting on another and more recent master's thesis survey done under a grant from the Foundation for Public Relations Research and Education in 1976, Lerbinger said, "The use of public relations research by corporations is on the rise and its function and contribution are becoming better defined and recognized." He also warned: "Our latest study makes it clear that practitioners who ignore research will soon discover that they too are ignored."[4] Along these same lines, Gallup noted in Lesly's Public Relations Handbook: "With survey research fast becoming an indispensable part of public relations, it behooves persons engaged in the field of

public relations to have at least a general knowledge of research techniques and capabilities." He added that "Survey research has reached a high level of sophistication. Aided by the computer, it is destined to play an even greater role in our lives. Not the least beneficiary will be the public relations man (sic)."[5]

In practice, public relations professionals have been less than quick to accept the promised benefits of research. In what may be the classic understatement on the topic, a recent Public Relations Journal article opened with the observation that "Many public relations practitioners do not fully understand what is involved in opinion and market research -- how it works and how to use it."[6] Grunig's introduction to a special issue of Public Relations Review devoted to a national conference on measurement in public relations reiterated that "Public relations professionals are more often 'doers' than researchers."[7] A Journalism Quarterly review of the 1969 book which remains as the definitive link of public relations practice and research, Robinson's Public Relations and Survey Research, concluded that the concepts "in the past have been almost mutually exclusive -- and remain so to a large degree today."[8] So while scientific research has long held promise in the field, its actual application has been limited. As Fairman noted in the forward to Robinson's book:

> There seems to be an awesomeness about these sciences that dazzles the public relations practitioner (and student) and blinds him to their usefulness. In his defense, however, it can be said that few behavioral scientists have shown much willingness to shed their golden armor and get into working clothes.[9]

The gap isn't confined to the professional world; it extends as well to the academic as summarized by Grunig: "Research . . . has

not been an important ingredient in the training of most public relations practitioners. Likewise, few academic researchers have a special interest in public relations research. . . . Development of public relations researchers -- both academic and professional -- and development of an understanding of the uses of research among PR professionals are among the most important requisites for the improvement of the public relations profession" (italics added).[10]

Program

In efforts to operationalize agreement with this philosophy, a new research teaching program was developed as part of an undergraduate advanced course in public relations techniques/methods. This approach utilizes an online computer terminal system to analyze up-to-date field survey data. In one current application, students utilized interactive computer analysis of a statewide public opinion survey in their development of account team campaigns for both pro and con communications programs relating to nuclear energy information problems. Specifically, the program is designed to provide a linking system of live research data and active computer analysis in comprehensive and realistic audience-targeted communications programs.

In the initial phase of the project, analysis and interpretation of the data, the class is advised to follow the three-aspect approach outlined in the Robinson text.[11] First, the students work at making sense out of the data obtained. Interpretations and generalizations -- which must be defended -- are made from the figures, tables, etc. Students learn that facts do not speak for themselves, even when flashed on a video display terminal or stated in a computer printout. Organization and emphasis of the data includes writing a report of the survey and computer analysis

to guide the development of the final communication program. Second, as Robinson notes, there is the "need to qualify" when summarizing any phenomena -- regardless of what that phenomena might be." We remind students of the notion that there are two major approaches to quantification:

> One is to report findings in terms of percentages, mean values, frequency tallies, and so forth; this is the approach we normally associate with research reports -- and normally expect. The other approach quantifies in terms of adjectives and adverbs, not numbers, and the writer resorts to expressions such as 'The majority,' . . . 'virtually no one,' . . ., or 'the bulk' . . . These sentences represent numerical summarizations and generalizations without the actual numbers. In this second type of approach the writer is often unaware that he has quantified, that he has had to do so in order to summarize. In addition, the writer may not even have any data to support his implied statistics.[12]

The final aspect of the data analysis and interpretation is researcher sensitivity to generalizations. The students are cautioned to emphasize the legitimacy of both generalizations drawn from the data and generalizability of the sample studied as a means of characterizing the larger population it is intended to represent.

Method

The computer system used in these classes is one which uses the central timesharing concept. Central timesharing systems utilize a single central computer with a number of satellite terminals. Thus, users of the computer may share the computer simultaneously. At the central computer facility, there is the capacity to store data sets for general use. Students may "call up" a particular set of data, say from Field Institute polls, and perform whatever analyses deemed appropriate. Each student is provided simple instructions (see appendix A) on how to use the system and how to use particular programs available.

Most students use the Statistical Package for the Social Sciences (SPSS) which is available in an interactive version.

After receiving an assignment for a particular campaign, the students are given their instruction set and sent to the nearest terminal location (on our campus, there are four satellite laboratories as well as several terminals available in faculty offices). It has been the experience of many instructors in computer-related areas that the student laboratory experience of trial and error is the best means of teaching. The particular advantage of the interactive system over the more traditional batch system of using computer cards is that there is immediate feedback, both positive and negative. With such, the student has the opportunity to immediately correct any errors which may arise.

If the student is satisfied that the appropriate instructions have been given the computer and the program is, in fact, running correctly, he/she may request a printout of the computer output. The student then has available results in a format which enables him/her to build a more sophisticated public relations program.

Data Analysis and Applications

Each student is provided a set of instructions as to how to access the relevant variables in any given data set. Those instructions show the student how to obtain frequency distributions for all of the variables to be considered in the class project. These distributions provide frequency counts, percentages, and several other statistics describing the variables. The frequency distribution provides at a glance the general picture of the data. Students then study these

distributions in order to begin to get a feeling for the pattern of attitudes, characteristics, and any reported behaviors of the sample.

After frequencies have been studied, students are assigned to groups for discussions of the data. This is an important step for it allows for the development of more sophisticated questions for which simple frequency distributions do not provide answers. For example, a student may want to know if those persons who support energy programs differ according to their area of residence from those who do not support energy programs. Single variable frequencies don't give an answer. The student is then given an introduction to crosstabulation, the most common analytical tool used in social research. Crosstabulation is simply a joint frequency distribution of cases for two variables. With crosstabulation, students may see quickly if there might be a relationship between two variables. For example, in Table 1, we have crosstabulated attitudes toward building a nuclear power plant with area of residence. The crosstabulation shows that it is likely a relationship exists between the area in California in which a person lives and his attitude toward building nuclear power plants.

The most important advantage of using crosstabulation is that the student has been allowed to answer the questions that he/she personally formulated. With all of the possibilities for crosstabulation that exist within any set of data, it would be prohibitively expensive to provide immediate answers to all questions that might arise other than through such a computerized means. In this way, students are exposed to the concept of targeting their messages through an inexpensive and immediate means.

Table 1

Example of Crosstabulation

* * * * * * * * * * C R O S S T A B U L A T I O N O F * * * * * * * * * * *

V1 AREA OF RESIDENCE BY V3 NUCLEAR PLANT ATTITUDES

* *

		V3 NUCLEAR PLANT ATTITUDES			
	COUNT ROW PCT COL PCT TOT PCT	FOR 1	NEUTRAL 2	AGAINST 3	ROW TOTAL
V1 AREA OF RESIDENCE	Northern California	75 13.0 17.6 6.7	50 8.7 40.0 4.4	450 78.3 78.3 40.0	575 51.1
	Southern California	350 63.6 82.4 31.1	75 13.6 60.0 6.7	125 22.7 21.7 11.1	550 48.9
	COLUMN TOTAL	425 37.8	125 11.1	575 51.1	1125 100.0

Of course, frequency distributions and crosstabulations merely scratch the surface of what is possible. But, they are vastly superior, in our view, to the starting points of most in-class public relations campaigns.

Data Sets Available

During the past semester, two sets of data were relied upon most heavily. These were a survey completed by the Field Institute in June 1977 and the General Social Survey done by the National Opinion Research Center in 1975. The later was utilized primarily to provide students with the ability to understand the computer procedures, fundamentals of data analysis, and how to make interpretations of computer printouts and the data provided. These data sets are purchased by the state university system and made available to each of the individual campuses. Each of the data sets is useful for a variety of disciplines. Thus, the administration of the university system can more easily justify the cost of purchasing such sets. These and a number of other timely and relevant files, including several from the Inter-University Consortium for Political and Social Research (ICPSR)/American Political Science Association's Supplementary Empirical Teaching Units in Political Sciences (SETUPS) series, are maintained in immediately available save file format.

Equipment Necessary

While most students and faculty only see a computer terminal, which consists basically of a video display and a coupler to link the terminal and a central computer via phone line, what they really are using is the capability of a central timesharing computer. Most campuses

of any size have such a capability. What many may not have is a large number of terminals spread across the campus which use phone-lines to access the computer. Terminals and couplers are fairly inexpensive and are sometimes available second-hand. (In fact, two terminals were donated to the department by a local manufacturer who was discontinuing a particular model.) There are also available terminals which look basically like a large electric typewriter. This type provides an instructor a better ability to demonstrate the capabilities of the interactive system because it provides a printout of the computer session.

Objectives/Advantages

There are at least three objectives of this approach to public relations teaching. The first is to introduce students to the research process, crucial to the modern practice of public relations. Students work with a live research project rather than one which is introduced as a hypothetical classroom situation, presented merely for pedagogical purposes. For those students who have completed the communications research course offered in the department, it is generally their first opportunity to use their research knowledge on live data. (Approximately one half of the students in the Public Relations Methods course will have completed or be enrolled in the research course.) Further, for those students who have no prior knowledge of research, analyzing actual data makes them more receptive to enrolling in a research course.

A second objective is to expose the student to a technology which is rapidly becoming integral to nearly all types of organizations.

That is the technology of the computer. Students can see that the computer is a tool with which they can work, that it can do work for them, and that it provides a wide range of services.

Our third objective of the use of the interactive system is that it is an excellent vehicle to teach students the concept of audience targeting of communications, a concept succinctly described in the following:

> To obtain the maximum effect in communication and persuasion, each public must have special study and special treatment. Pimlott says: 'This emphasis on the need to pinpoint the specific publics in one of the most useful contributions which public relations has received from the social scientists.' Much of today's publicity effort is characterized by wasteful misses. Research enables the practitioner to pinpoint his publics, discover their leaders, learn their values, viewpoints, and language. There he must know if he is to beam his message in on its target. A public relations effort increases in effectiveness in proportion to the specificity with which it is directed to a group.[13]

Targeting is a major emphasis of the course and because of the many demographic variables in the data sets utilized, audiences may be broken out into virtually countless groupings for analysis. Characteristics of subgroupings within the sample may be easily ascertained through simple crosstabulations, provided instantaneously via the computer system.

Project Evaluation

Evaluation of the effectiveness of this approach has initially been accomplished in three ways. There are informal (and certainly selective as well as subjective) self reports provided in discussions with students in and outside of the class. Additionally, evaluation of the research project was accomplished through the normal student

evaluation of the teacher and course, which is required at our university at the end of each semester. Optional open-ended questions are included by the instructor in this course and students frequently took this opportunity to include comments on the research portion of the semester's activities. The third means of evaluation, utilized near the end of the past Spring semester, was a brief questionnaire dealing specifically with the research project. Responses were anonymous and optional. The instrument contained 11 Likert scale questions, including student attitudes toward research value and application, the project value and potential for stimulating interest and ability. Additional questions were designed to obtain student rankings (excellent to poor) of the project, including the level of difficulty, and a few basic demographics. Two open-ended questions sought comments on the strengths of the project and suggestions for improvement.

It was quite obvious from the outset that the project was a difficult challenge. Nevertheless, all three of the above evaluation methods indicated over-all favorable attitudes toward the project and support for innovation in techniques and content. For example, while only 88 percent of the students rated the over-all course "very difficult" on the four-scale question, 100 percent rated the specific project "very difficult" (29 percent) or "difficult." At the same time, 83 percent of the class either "strongly agreed" or "agreed" that the data-based research project contributed to the development of the client's communications program. From 77 to 72 percent "agreed" or "strongly agreed" to statements relating to the value of the learning experience, increased sense of competence in research, and increased interest in learning more

about research. It was not surprising to find [illegible] the results of the questionnaire expressed (a) student frustrati[illegible] mechanical/ technical problems of working with the compu[illegible] minals, and (b) a desire for additional introductory instruction in research. One outgrowth of the past semester's experiences has been the introduction of basic aspects of computer use and data analysis in the department's public relations principles course which is a prerequisite to the advanced techniques course discussed here.

Summary

The research program which was started in 1976 is still evolving. The data sets used at that time were based on regional surveys conducted for the United Way and American Cancer Society and the results of the polls had already been analyzed and summarized by the commercial research firms employed by the client organizations. While even this limited approach proved valuable for student account teams in their development of data-based, audience-targeted communications, the current interactive computer analysis approach provides additional opportunities for making qualitative interpretation and application of quantitative data. In short, we are convinced that to be most effective the instruction must establish an active, realistic model, not merely advocate the idea of research. In attempting to provide that type of learning model, this approach also adopts the thesis summarized by Robinson:

> The old 'flying by the seat of the pants' approach to solving public relations problems is over. While there will always be a need for the intuitively based decision under some circumstances, decisions based on hunch, guessing, experience,

and the rationale that 'this is the way we have always done it' are a thing of the past. Hunches, guessing, previous experience, and an awareness of prior practice are all appropriate under certain circumstances, but none of these is a substitute for decision making based on reliable research data.[14]

APPENDIX A

Interactive Computer Program: Field Institute Survey

The following brief instructions will assist you in using the Field Institute data file FI7703 through the use of the campus interactive computer system and SPSS (the Statistical Package for the Social Sciences program).

Your step-by-step procedures are numbered and typed in CAPITAL LETTERS, with most of the computer responses noted. This guide will permit you to access the data file, perform frequency analysis of selected survey questions (step 12), and make an initial printout request. Slight modification of the analysis steps -- as you become more sophisticated survey researchers -- will permit you to explore the live data file in more depth in the development of your energy case project.

The NOS phone number used in linking your terminal to the CTS (central time sharing) system is extension 2704.

1. E
   hi
2. res: CTS (return key)
3. / (press return key)
4. user no. L183037 (Return key here and after every command)
   password
5. [redacted] (Here you type in password)
6. recover system: ATTACH,FI7703/UN=7522DBA
   ready
7. -SPSS7
   use an spss system file this run?
8. YES
   enter file name
9. FI7703
   use a raw data file this run?
10. NO
    auto-mode
11. ? 10 GET FILE; FI7703
12. ? 20 FR; GENERAL=Q24 TO Q31B
13. ? EXECUTE, ENERGY
    entering spss
14. ? END
    goodbye
    ready

15. -PRINT(FN=ENERGY)

enter banner message (4 lines max.)

16a. ? Type your name

b. ? Type brief title of printout

c. ? COMMUNICATIONS DEPARTMENT (PROF. KALUPA)

d. ? CALIFORNIA STATE UNIVERSITY, FULLERTON

file____has been printed.
ready

17. BYE

L183037 logoff

******

NOTES: (1) Steps 14 and 15 provide a printout of your requests. This can be picked up in the Computer Center, LH-210, approximately 24 hours later.

(2) Interactive computer terminals are available at the following locations:

* Computer Center (LH-210)
* H-523
* EC-46
* Faculty offices.

FOOTNOTES

[1]A Design for Public Relations Education, J. Carroll Bateman and Scott Cutlip, co-chairmen. Report of the Commission on Public Relations Education (Association for Education in Journalism and Public Relations Society of America, 1975), p. 10.

[2]Scott M. Cutlip and Allen H. Center, Effective Public Relations (2nd ed.; Englewood Cliffs, N.J.: Prentice-Hall, 1958), pp. 94-95. A similar version of David Finn's quotation appears in the 5th edition, 1978, p. 143.

[3]Eleanor K. Harvill, "Research," in Handbook of Public Relations, ed. by Howard Stephenson (2nd ed.; New York: McGraw-Hill, 1971), p. 43.

[4]Otto Lerbinger, "Corporate Use of Research in Public Relations," Public Relations Review, III (Winter, 1977), p. 11.

[5]George Gallup, "The Role of Research in Public Relations: Guidelines and Techniques," in Lesly's Public Relations Handbook ed. by Philip Lesly (Englewood Cliffs, N.J.: Prentice-Hall, 1971), pp. 305 and 306.

[6]Walter K. Kindenmann, "Opinion Research: How it Works; How to use it," Public Relations Review, January, 1977, p. 12.

[7]James E. Grunig, "Measurement in Public Relations -- an Overview," Public Relations Review, III (Winter, 1977), p. 5.

[8]Frank B. Kalupa, review of Public Relations and Survey Research by Edward J. Robinson in Journalism Quarterly, 47 (Winter, 1970), p. 791.

[9]Edward J. Robinson, Public Relations and Survey Research (New York: Appleton-Century-Crofts, 1969), p. xiii.

[10]Grunig, pp. 5-6.

[11]Robinson, pp. 98-99.

[12]Robinson, pp. 98-99.

[13]Cutlip and Center, p. 195

[14]Robinson, p. ix.